

Module 1: CERT Basics

Lesson 1-0: Course Overview

Lesson Overview

The Community Emergency Response Team (CERT) Program educates ordinary people about disaster preparedness and weapons of mass destruction. The CERT Program trains you in basic disaster response skills, such as fire safety, light search and rescue, and disaster medical operations. With proper CERT training, you can help protect your family, neighbors, and co-workers if a disaster occurs.

After completing this course, CERT Independent Study (IS)-317, you should be able to:

- Identify key concepts that form the foundation for CERT operations
- Identify principles and guidelines for CERT activities

This lesson provides an overview of the CERT role in disaster preparedness and response. It also covers what you will learn in other lessons about CERT organization and activities.

It should take you approximately **20 minutes** to complete this lesson.

Course Purpose

The purpose of this course is to help you prepare for the classroom-based *CERT Basic Training* course that may be available in your community. This training (WBT) includes many practices useful for dealing with emergencies that may occur in non-disaster situations. The classroom-based training (CBT) includes many additional skills and protocols you can learn through demonstration and hands-on practice in the classroom. Once you successfully complete the CBT, you will be an actual CERT member and will be trained to deal with emergencies that may occur in real disaster situations.

Remember!

You are not a trained CERT volunteer until you have completed the CERT Basic Training classroom course.

Course Structure

The 16 lessons in this course are organized into six modules, to be completed in sequence. Each module is made up of multiple lessons, also to be completed in sequence within each module. The six modules are:

- Module 1: CERT Basics
- Module 2: Fire Safety
- Module 3: Hazardous Materials and Terrorist Incidents
- Module 4: Disaster Medical Operations
- Module 5: Search and Rescue
- Module 6: Course Summary

Now you will have a brief introduction to each module. Are you ready?

Module 1: CERT Basics

In Module 1, you will learn how training as a CERT member allows you to contribute to the safety and welfare of your family and community, and how to prepare your home and workplace for disasters.

There are three lessons in this module:

- **Lesson 1-1: CERT Overview** identifies ways in which you, as a CERT member, can serve your community during emergencies.
- **Lesson 1-2: Family and Workplace Preparedness** will help you prepare your home and workplace for disasters.
- **Lesson 1-3: CERT Organization** shows how CERT organization can provide for your effective participation in disaster response.

It should take you approximately **1 hour 25 minutes** to complete this module.

Module 2: Fire Safety

In Module 2, you will learn the various fire safety practices that CERTs must follow.

There are three lessons in this module:

- **Lesson 2-1: Introduction to Fire Safety** presents the fire safety fundamentals you will need as a CERT member.
- **Lesson 2-2: Fire Hazards in the Home and Workplace** shows you actions that you can take to minimize fire hazards in your home and workplace.

- **Lesson 2-3: Safe Fire Suppression** details actions that CERTs use to suppress fires safely.

It should take you approximately **1½ hours** to complete this module.

Module 3: Hazardous Materials and Terrorist Incidents

In Module 3, you will learn practices that CERTs must follow in situations that involve hazardous materials or terrorism.

There are three lessons in this module:

- **Lesson 3-1: Introduction to Special Situations** details the types of situations that CERTs may face in dealing with hazardous materials and/or terrorism.
- **Lesson 3-2: Hazardous Materials Safety** introduces the actions CERTs take to deal with hazardous materials safely.
- **Lesson 3-3: Terrorism and CERT** discusses protocols you should follow to prepare for a possible terrorist attack.

It should take you approximately **1 hour 5 minutes** to complete this module.

Module 4: Disaster Medical Operations

Module 4 provides an overview of the practices that CERT members must follow during disaster medical operations.

There are three lessons in this module:

- **Lesson 4-1: Introduction to Disaster Medical Operations** identifies the basic principles and practices CERTs need for disaster medical operations.
- **Lesson 4-2: Principles and Guidelines for Victim Care** introduces key principles and practices CERTs use for medical care of disaster victims.
- **Lesson 4-3: Disaster Psychology** explains different psychological stresses associated with disaster responses.

It should take you approximately **2 hours 25 minutes** to complete this module.

Module 5: Search and Rescue

Module 5 provides an overview of the practices that CERT members must follow when participating in search and rescue operations.

There are three lessons in this module:

- **Lesson 5-1: Introduction to Light Search and Rescue** presents the key principles and practices that CERTs must follow for light search and rescue operations.
- **Lesson 5-2: Search Operations** introduces practices that CERTs use for safely conducting search operations.
- **Lesson 5-3: Rescue Operations** provides an overview of key procedures that CERTs use for safely conducting rescue operations.

It should take you approximately **1 hour 15 minutes** to complete this module.

Module 6: Course Summary

In Module 6, you'll review the key points you learned in the five previous modules. You'll also learn the steps you must take to receive credit for this based training and how you can download and print your certificate of completion if you pass the test.

It should take you approximately **20 minutes** to complete this module. This does not include time to take the test.

Lesson Summary

In this lesson, you learned that this course:

- Introduces you to basic CERT skills and procedures
- Prepares you for classroom-based *CERT Basic Training* course
- Contains easily navigable features and tools
- Comprises six modules made up of multiple lessons

You have completed this lesson. You are now ready to begin Lesson 1: Introduction to CERT.

Module 1: CERT Basics

Lesson 1-1: CERT Overview

Module Overview

Welcome to Module 1: CERT Basics. In this module, you will learn about the CERT role in disaster preparedness and response. You will also learn the basics about how CERT is organized.

It should take about **1 hour 25 minutes** to complete the three lessons in this module:

- Lesson 1-1: CERT Overview — **25 minutes**
- Lesson 1-2: Family and Workplace Preparedness — **35 minutes**
- Lesson 1-3: CERT Organization — **25 minutes**

After completing this module you should be able to:

- Identify ways in which CERT members contribute to the safety and welfare of their families and communities

Lesson Overview

Welcome to Lesson 1-1: CERT Overview.

After a disaster, emergency responders can become overwhelmed by the needs of their community. Damage to communication and transportation systems often further taxes their resources. It is possible that, following a disaster, CERTs may be called to respond to immediate needs in their area.

This lesson provides an overview of the CERT concept and the ways that CERTs serve as community resources by contributing to emergency preparedness and response.

After completing this lesson, you should be able to:

- Identify ways in which CERTs contribute to disaster preparedness and response

It should take you approximately **25 minutes** to complete this lesson.

CERT Concept

CERT members come from neighborhood, workplace, or other community organizations. Members join because they want to learn how to better prepare for hazards that threaten their homes and communities. They want to protect their families, themselves, and their communities.

The CERT Program began by training community members for earthquake response operations. Under the Federal Emergency Management Agency (FEMA), the CERT Program has grown to cover all types of disasters in communities around the country.

As a CERT member, you will become an active participant in learning about hazards and preparing for them. After training, you may be called upon to support emergency services following a disaster.

CERTs: Community Resource

CERTs are not restricted to disaster-related activities. You have the potential to become a known and trusted volunteer resource in your community. As a CERT member, you can support the response community in many ways. For instance, you can help with community safety projects or help neighbors and co-workers prepare for emergencies.

CERT Participation in Disasters and Emergencies

CERT members have participated in many emergency and non-emergency situations. Here are a few examples of CERT contributions.

Floods - Morgan County, Indiana - June 2008

Massive flooding in central Indiana wiped out 75 percent of farmers' crops and closed a local hospital for five months. Although it took only 8 hours for 11 inches of rain to devastate the area, CERT members were still working six weeks after the storm hit. They performed a variety of jobs, including:

- Handing out food and disaster kits
- Assisting with sandbags
- Directing traffic

Tropical Storm Fay - DeBary, Florida - August 2008

Tropical Storm Fay hit Florida for nearly a week. In DeBary, 22 inches of rain fell, causing loss of both life and property. CERT volunteers assisted in a number of support activities, including:

- Directing traffic
- Filling sandbags
- Delivering supplies to elderly residents and emergency responders
- Staffing city phones
- Documenting damage
- Relaying important safety information to residents
- Maintaining security around affected areas

Olympic Trials - Eugene, Oregon - June 2008

The U.S. Olympic Track and Field Trials in Eugene, Oregon, attracted daily crowds of more than 25,000 people. CERTs were initially activated to assist the Eugene Fire Department. Due to a volunteer shortage, their role was expanded. They performed duties such as:

- Checking bags and wanding attendees
- Helping with crowd control
- Assisting with traffic control
- Providing directions to citizens
- Helping lost individuals
- Assisting those with special needs

Power Outage - Miami, Florida - June 2008

During a recent regional and statewide power outage in Miami, Florida, the University of Miami 'Canes Community Emergency Response Team was activated. The team assisted with traffic management at congested intersections where traffic signals were out. The local police station had previously trained many University of Miami CERT members in traffic management. They assisted professionals with their quick, coordinated response and excellent skills.

Why Do Communities Need CERTs?

Disasters can put lives and property in your community at risk while overwhelming resources. Widespread damage may create more needs than can be immediately met. If communication, medical, or transportation systems suffer serious damage, responder action can be delayed.

What kind of damage do you think can prevent a quick response?

Infrastructure Damage and Response

Damage to the infrastructure restricts the ability of first-response personnel to identify and respond to those in need. Significant damage to the infrastructure includes:

- Transportation
 - Inability to assess damage accurately
 - Ambulances prevented from reaching victims
 - Police prevented from reaching damaged areas
 - Fire department prevented from reaching fires
 - Flow of needed supplies interrupted
- Structures
 - Damaged hospitals unable to function normally
 - Increased risk of injury from falling debris
- Communication Systems
 - Victims unable to call for help
 - Coordination of services hampered
- Utilities
 - Loss of utilities
 - Increased risk of fire resulting from gas or electrical problems
 - Inadequate water supply
 - Increased risk to public health
- Water Service
 - Firefighting capabilities restricted
 - Medical facilities hampered
- Fuel Supplies
 - Increased risk of fire or explosion from fuel line ruptures
 - Risk of asphyxiation
 - Flow of needed supplies interrupted

CERT Training and Safety

When a community suffers damage caused by a natural or manmade disaster, CERT members have the chance to be of great assistance to neighbors, co-workers, and others. But remember: CERT members are not trained or equipped to handle incidents as professional responders. And CERT members are trained to always keep themselves safe while helping others.

CERTs Augment Response Resources

The multiple effects of a disaster can put a strain on local and surrounding resources. And when their resources are taxed, emergency services must focus on the highest-priority needs. For example:

1. Police address incidents having a **grave** impact on public safety.
2. Firefighters suppress **major** fires.
3. EMS personnel focus on **mass** casualty events they can reach.

Emergency services will take time to respond to these and other needs. This is where CERTs come in.

As a CERT member, you can provide valuable assistance by addressing the needs that may arise before professional responders can arrive in your neighborhood or workplace.

Do you want to learn how actual CERT members feel about their role in the community?

CERTs Make a Difference

You will now have an opportunity to see how CERT members make a difference in their communities.

Allen Abbott

It's a fantastic program. I think it should be taught in every community across the country, and, if it was, then the response that the professional community has to give would be reduced, and even the little day-to-day emergencies would be minimized for the general public, if everybody took it. I'm part of the solution and not adding to the problem, probably most important.

Jamie Garvelle

I've been a volunteer in a lot of different areas, and this was just one more place to get some knowledge and experience and hopefully be of assistance. It's kind of a mindset. The people who come out and do this have a tendency to be people who care about the community anyway, so you've got that in common from the start.

John Clark

CERT is important because it provides hands-on training and an awareness of what's going on in your community. That also gives you resources to call upon yourself in order to take care of your family, and it's kind of like an expanding ripple, kind of like dropping a rock in a pond and the ripple out for a CERT person. Our goal is to make sure we are safe and protected. Then we move out to the next level and check our family, and from there we move out to our community and make sure our neighborhood is safe and that everyone is taken care of, and from there we move out to our actual CERT staging area. So it's a multi-part program and concept that we use to make sure our community and our neighborhoods are safe and protected.

Sara Trimble

We had an earthquake here a couple of years ago, and it definitely shook everybody up, and you realize once again why you're doing this, you know, if something happened, I want to feel like I have something to contribute to help and not feel like I'm stuck, not knowing what to do. CERT certainly gives you a

background in what you can do to be helpful and what you shouldn't do, too, you know, that might get yourself in trouble.

Knowledge Review

Review each statement and then indicate if it is true or false.

- | | | | |
|----|---|---|--|
| 1. | T | F | CERTs operating in their neighborhoods can extend the capabilities of response organizations. |
| 2. | T | F | CERT requires volunteers to be extensively trained so that they can take the place of emergency responders. |
| 3. | T | F | When response resources are limited, emergency services usually convert to a first-come, first-served basis for deploying personnel. |
| 4. | T | F | Damage to the infrastructure often restricts the capabilities of response services. |

Answers:

1. T
2. F
3. F
4. T

The Role of CERTs

Now, let's look at CERT roles. Effective CERTs are well-organized, well-trained, and well-managed.

Two common roles you will have as a CERT member are in hazard mitigation and disaster response. You will learn more about these in Lesson 1-2, but let's discuss them briefly now.

Safety

Remember: In all CERT activities, your safety is the number one priority!

Hazard Mitigation and CERTs

Hazard mitigation involves taking preventive actions both before and after a disaster.

First, you reduce hazards in the home or workplace **before** a disaster occurs. Then, you act immediately **after** an event to minimize damage and risk.

Examples of CERT mitigation activities include:

- Eliminating unnecessary hazardous materials from your home
- Ensuring that none of your electrical outlets are overloaded
- Shutting off gas meters that are leaking after an event

Now let's discuss disaster response.

Disaster Response and CERTs

Based on your local CERT Program's operating procedures, you may respond in your area following a disaster. CERT members are trained to provide help when professional responders are delayed. And once professional responders arrive, you may be asked to assist them with critical support activities.

CERT training is critical to your response. A few examples of the training you will receive are:

- Locating and turning off utilities when it is safe to do so
- Extinguishing small fires safely
- Treating life-threatening injuries until professional assistance can be obtained
- Conducting light search and rescue operations
- Helping survivors cope with trauma

You'll learn more about these response activities in later lessons, which will prepare you for the hands-on *CERT Basic Training* course in the classroom.

Non-disaster CERT Roles

CERT members can be valuable resources in their communities by helping with community events and public safety projects. CERT members:

- May go into a community before a disaster to identify and aid community members who may need help during a disaster. One way they can help is to verify and update a list of special needs residents who have previously

registered with local emergency responders. This list enables local emergency personnel, who carry a copy of the list with them, to know who is a priority during an event. The CERT will verify the address and needs of each person on the list. While doing so, the team can also give a list of items the person should take when he or she evacuates, and conduct a basic safety check of the home and smoke detectors.

- Can distribute preparedness materials and conduct preparedness demonstrations. They may speak to current CERT classes undergoing training, or be asked to speak at community centers or homeowners associations. They can explain the purpose of CERT and hand out helpful information on being prepared for a disaster. They may also hand out materials on behalf of local emergency management personnel, ensuring that their community has the most up-to-date information to prepare for an event.
- Staff parades, health fairs, county fairs, and other special events. This enables CERT members to provide helpful information to their community. This could be an informational pamphlet about CERT or something distributed on behalf of local emergency management personnel. Or it could be CERT members staffing the first aid or lost child areas at a county fair. A CERT in Los Angeles frequently staffs the finish line of the LA Marathon. The team hands out water, administers basic first aid, and brings runners to the medical tent.
- Can assist with the installation of smoke alarms for seniors and special needs households. Members receive training on how to install smoke detectors and answer basic fire and life safety questions. Some areas also have smoke detector hotlines. Residents phone in their questions and hotline staff contact a nearby CERT member to assist residents with their needs.
- May provide parade route traffic management and traffic and crowd control at other events. Members can assist by covering intersections and other areas not being covered by police. In the case of parades, CERT members work to guide traffic and pedestrians out of the path of the parade. At other events, such as a marathon, members keep runners on the correct route and pedestrians from being where they shouldn't be.

Knowledge Review

1. T F Reducing potential fire hazards in your home is an example of a hazard mitigation action.
2. T F The CERT member's role is to promote disaster preparedness; CERT members very rarely become involved in disaster response.
3. T F As a CERT member, your number one priority is to ensure the safety of those in need.
4. T F Part of your CERT training will include learning how to extinguish small fires and how to conduct light search and rescue operations.

Answers:

1. T
2. F
3. F
4. T

Lesson Summary

In this lesson, you learned that:

- Disasters may overwhelm emergency response resources.
- CERTs can extend the capabilities of response organizations through hazard mitigation and response activities.
- Before a disaster, CERTs focus on emergency preparedness and hazard mitigation.
- After a disaster, CERTs may operate directly or assist responders in activities to save or sustain lives and protect property.

You have completed this lesson. You are now ready to begin Lesson 1-2: Family and Workplace Preparedness.

Module 1: CERT Basics

Lesson 1-2: Family and Workplace Preparedness

Lesson Overview

Welcome to Lesson 1-2: Family and Workplace Preparedness.

As a CERT member, you may have opportunities to help with preparing your neighborhood or workplace for a disaster. This lesson teaches you preparedness strategies that you can use at home or work.

After completing this lesson, you should be able to:

- Identify hazard mitigation strategies
- Identify the steps for developing a family disaster plan
- Select the necessary items to include in disaster supply kits

It should take you approximately **35 minutes** to complete this lesson.

Overview

CERTs support emergency services by preparing for disasters before they occur. Once you become a trained CERT member, you can respond, when necessary, to immediate needs in your neighborhood or workplace after a disaster occurs. But first, you need to be sure that you're prepared at home and at work.

Are You Ready?

Think about your home and workplace. Are you prepared for a disaster?

Preparedness

Preparedness is the key to protecting lives and property when a disaster strikes. This means taking steps before a disaster occurs to lessen the impact so you're prepared to take action when needed.

Before You Begin

Remember that, as a CERT member, your first responsibility is to ensure that your family and neighbors are safe.

A good place to start is with the FEMA publication, *Are You Ready? An In-depth Guide to Citizen Preparedness*. You may want to review this document before continuing with this lesson.

You can access *Are You Ready?* at the following web address:

<http://www.fema.gov/areyouready>.

Another source for preparedness information is the *Ready* site. It includes general information as well as material for specific groups, such as older individuals, military families, people with disabilities, and pet owners. You can access *Ready* materials at <http://www.ready.gov>.

Home and Workplace Preparedness

There are two important areas to address as you prepare your home and workplace: hazard mitigation and disaster preparations.

In hazard mitigation, identify potential hazards in your home and workplace. Then take the appropriate steps to remove or reduce them.

In disaster preparations, make plans and preparations that will enable you to respond quickly in the event of a disaster.

Hazard Mitigation

There are three steps to hazard mitigation:

1. Determining your community's probable disaster threats
2. Identifying potential hazards in your home and workplace
3. Taking preventive action to reduce the hazards

Mitigation Step 1: Determine Disaster Threats

The first step is to know which disasters are likely to affect your community. Some common disaster threats are:

- Earthquake
- Flood

- Winter storm
- Fire
- Hurricane
- Tornado
- Landslide/debris flow
- Wildfire
- Tsunami
- Hazardous materials
- Volcanic eruption
- Heat wave
- Nuclear incident
- Terrorism

Once you know the threats, you can identify potential hazards, such as ...

Threats and Hazards

These are a few examples of hazards based on threat:

- Wildfire: Flammable roofing materials and brush and vegetation
- Earthquake: Unsecured objects, such as a bookshelf or filing cabinet
- Flood: Utilities below flood level

Determining Disaster Threats: Questions to Ask

Disaster threats can be:

- Natural
- Manmade
- Technological

To identify probable events in your community and their likely impacts, there are several questions you can ask yourself. Let's see what a current CERT member asks himself.

Questions to Ask

This CERT member asks himself the following questions:

- Am I in a floodplain, near a fault, or near a volcano?
- Is my region prone to seasonal hazards, such as hurricanes, tornadoes, or winter storms?

- Are nearby sites likely terrorism targets?
- Am I near a nuclear or chemical plant that could release hazardous materials?

Can you think of any other important questions to ask as you identify probable events and impacts in your community?

Knowledge Review

What types of disasters might be most likely to affect your community? Write your answers below and compare to the answers given.

Answers:

A community might be at risk for any of the following events:

- Earthquake
- Flood
- Winter storm
- Fire
- Hurricane
- Tornado
- Landslide/debris flow
- Wildfire
- Volcanic eruptions
- Tsunami
- Heat wave
- Hazardous materials (chemical emergency)
- Terrorism
- Nuclear incident

Possible sources you can contact for additional information about your particular community include:

- Local emergency manager
- Fire department
- Local librarian
- Local chapter of the American Red Cross
- State department of natural resources

The more you know, the better you will be able to plan, prepare, and take preventive action. For more information about disaster threats, visit:
<http://www.fema.gov/areyouready>

Mitigation Step 2: Identify Hazards

The second step in hazard mitigation is to identify hazards. A good place to start is with buildings. Buildings that are harmless most of the time often have features that can become dangerous during a storm. Identify hazards based on two main groups:

- Structural: hazards that are a function of the building, roof, or other components
- Nonstructural: hazards related to fixtures and building contents

Let's talk about structural hazards first.

Structural Hazards

Types of structural hazards and their significance vary according to the:

- Age of the structure
- Type of construction
- Type of disaster

Here are four examples of common structural hazards.

- Home Not Bolted to Foundation
 - Homes built before 1940 generally were not bolted to the foundation. They are subject to being shaken, blown, or floated off their foundations.
- Unreinforced Brick Construction
 - Older homes constructed of unreinforced masonry are less stable than a new construction.
- Mobile Home
 - Mobile homes are easily displaced. Displacement can destroy structural integrity and break gas and electric lines, increasing the risk of fire and electric shock.
- Long Roof Span
 - Buildings with long roof spans are subject to roof collapse.

Knowledge Review

What are some potential structural hazards in your home? Write your answers below and compare to the answers given.

Answer:

Typical structural hazards:

- House not bolted to the foundation (earthquake, flood, tornado)
- Mobile home not strapped to the slab (earthquake, flood, landslide, tornado)
- Loose fuel tank (earthquake, flood, landslide, tornado)
- Utilities below flood level (flood)
- Rigid gas piping that could pull away from a moved appliance (earthquake, flood, landslide)
- Deep cracks or loose materials in the foundation, ceilings, roof, or chimney (earthquake, hurricane, tornado)
- Long roof expanses (earthquake, hurricane, tornado, winter storm)
- Large expanses of glass (earthquake, hurricane, tornado, winter storm)
- Panels that could fall (earthquake, hurricane, tornado)

If you are concerned about structural integrity, you may need to consult with experts, such as structural engineers, architects, or soil engineers. FEMA also provides information about reducing structural hazards in its online library:

<http://www.fema.gov/library/index.jsp>

Nonstructural Hazards

The second type of hazard is nonstructural. These hazards can occur in any structure and are items installed after the supporting structure of the building is complete. These may be hazards in their own right or become hazards after an event.

You should consider utility fixtures and building contents as nonstructural hazards.

Utility Fixtures

Gas, electric, and water lines can create a hazard for your family or neighbors. You should be aware of utility fixtures that could create a problem at your home or workplace. These are just a few examples of the problems utilities may create:

- Broken gas line connections from water heaters or ranges displaced by shaking, water, or wind
- Electric shock hazards from displaced appliances and office equipment
- Fire hazards from faulty wiring, overloaded electrical sockets or extension cords, and frayed electrical cords
- Utility boxes and electrical outlets below flood level in flood zones

Unsecured Building Contents

You should also consider unsecured building contents when you identify nonstructural hazards. Loose contents can cause damage or hurt someone when they fall. You should be especially aware of this hazard if your area is prone to earthquakes. Here are a few examples that you should look for:

- Unsecured furniture, appliances, and heavy objects on tables
- Items on open shelves
- Mirrors and pictures on walls — especially when above a sofa or bed
- Breakable items or chemicals stored in unfastened cabinets

Knowledge Review

What are some potential nonstructural hazards in your home and workplace? Write your answers below and compare to the answers given.

Answers:

Typical nonstructural hazards:

- Hot water heater that could move (earthquake, flood)
- Bookshelf or filing cabinet that could overturn (earthquake, flood, tornado)
- Picture or heavy mirror that could fall off the wall onto a couch or bed (earthquake)
- Appliances and office equipment that could fall (earthquake, flood)
- Unbraced overhead lighting fixture (earthquake)
- Breakable items, such as dishes, stored in cupboards without latches (earthquake)
- Electrical hazards (e.g., overloaded circuits)

- Chemical and fire hazards (e.g., flammable liquids stored on open shelves) (earthquake, flood, hurricane, landslide)
- Lack of smoke alarms or sprinkler systems

To obtain additional information, conduct a room-by-room walk-through. Keep in mind the types of disasters that pose a probable threat in your community. FEMA also provides information about reducing nonstructural hazards in its online library: <http://www.fema.gov/library/index.jsp>

Mitigation Step 3: Take Preventive Action

The final step in hazard mitigation is to take preventive action. After you've determined likely threats and identified potential hazards in your home or workplace, it's time to correct or reduce any hazards.

Mitigating Structural Hazards

There are several things you can do to reduce your risk of a structural hazard. A few examples include:

- Bolting older house to the foundation
- Strapping mobile home to the slab
- Raising utilities above the level of flood risk
- Repairing an unstable chimney, roof, and foundation

Mitigating Nonstructural Hazards

You can reduce your risk of nonstructural hazards as well. A few examples include:

- Anchoring furniture such as bookshelves, filing cabinets, and hutches to the wall
- Strapping a water heater to wall studs
- Installing flexible pipe fittings to avoid gas or water leaks
- Securing office equipment in place with industrial-strength Velcro®
- Securing cabinet doors with childproof fasteners
- Moving heavy objects to lower shelves and cabinets
- Replacing picture hangers with earthquake-resistant hooks
- Securing propane tanks

Knowledge Review

What are some potential mitigation actions that you can take to make your home or workplace safer? Write your answers below and compare to the answers given.

Answer:

There are many possible answers, depending on the particulars of your home and your location.

Compare your answers to the suggestions provided in the *Are You Ready?* document:

- Part 2: Natural Hazards
 - [Section 1](#)
 - [Section 2](#)
- [Part 3: Technological Hazards](#)
- [Part 4: Terrorism](#)

Family Preparedness

Hazard mitigation is just the first part of protecting your home and workplace. Preparedness also includes making plans that will enable you and your family to respond quickly in the event of a disaster. You should develop a comprehensive plan for how your family will respond to various hazards.

How prepared is your family for a disaster? Complete the emergency planning checklist here. (You can complete one for your workplace, too.)

Checklist for Home Preparedness

Plan	YES	NO
Develop an escape plan that covers every room in the house and considers the needs of children and physically challenged individuals.		
Pick two places to meet (near home and outside the neighborhood).		
Choose an out-of-state "check-in contact" for everyone to call.		
Identify an evacuation destination.		
Plan two evacuation routes (in case your primary route is impassable).		
Identify the nearest shelter location.		
Plan how to take care of your pets (generally not allowed in shelters).		
Find safe places in the home for each type of disaster.		
Make sure that you have adequate insurance coverage.		
Inventory your property to help prove the value of items damaged or destroyed in a disaster.		
Review your plan periodically and update, if necessary.		
Practice	YES	NO
Discuss the plan with all family members.		
Conduct family practices (fire drills, taking shelter, following evacuation routes).		
Make sure that family members know where fire extinguishers are and how to use them.		
Show responsible family members how and when to shut off water, gas, and electricity at main switches.		
Quiz children every six months to be sure that they remember the plan.		
Prepare	YES	NO
Post emergency numbers by every phone.		
Locate and label utility shutoffs.		
Install smoke alarms on every level (especially near bedrooms).		

Test smoke alarms monthly, change batteries twice a year.		
Check fire extinguishers according to manufacturer's instructions.		
Prepare a safe room for sheltering in place.		
Photocopy vital documents. Keep originals in a safe deposit box, store one copy at home, and give a copy to someone out of town.		
Assemble a disaster supply kit.		
Coordinate with Neighbors	YES	NO
Plan how neighbors can work together after a disaster.		
Identify neighbors' skills (e.g., medical or technical).		
Identify neighbors with special needs (e.g., elderly, disabled) who may need help in an emergency.		
Make plans for child care in case parents can't get home.		

Disaster Supply Kit

It's important to be prepared. Assembling the supplies that you might need following a disaster is an important part of your family disaster plan. A disaster supply kit should include:

- Basic disaster supplies
- Evacuation supplies stored in an easy-to-carry container
- Home disaster supplies for sheltering in place

You can complete your own disaster supply kit checklist to see how ready you are.

Disaster Supply Kit Checklist

Basic Kit	YES	NO
Portable, battery-powered radio or TV and extra batteries		
Flashlight and extra batteries		
First aid kit and first aid manual		
Supply of prescription medications or copies of prescriptions		
Credit card and cash		
Personal identification and important family documents (insurance policies, identification, bank account records, all kept in a waterproof, portable container)		
An extra set of keys		
Matches in a waterproof container		
Signal flare		
Special items (e.g., diapers or formula, hearing aid batteries, spare wheelchair battery, spare eyeglasses, or other items for physical needs.)		
Evacuation Supplies: Basic kit plus the following items, packed in a portable carrier (e.g., duffle bag), labeled, and stored in a convenient location.	YES	NO
Plan to have one gallon of water per person per day, for three days, for drinking and sanitation. Children, nursing mothers, and sick people may need more water. If you live in a warm-weather climate, more water may be necessary. Store water tightly in clean plastic containers, such as soft drink bottles. Don't use plastic milk jugs to store water.		
Store at least a 3-day supply of non-perishable food. Select foods that require no refrigeration, preparation, or cooking and little or no water. (Protein or fruit bars, dry cereal or granola, peanut butter, dried fruit, nuts, crackers, canned juices, non-perishable pasteurized milk, high-energy foods, vitamins, infant food, comfort/stress food, and canned meats, fruits, and vegetables)		

Kitchen accessories (can opener, utensils, utility knife, cooking fuel, bleach to treat drinking water, sugar, salt, pepper, plastic bags, aluminum foil)		
Change of clothing and footwear		
Weather protection (gloves, jacket, raincoat, sunscreen, hat, etc.)		
Sanitation/hygiene items (toothbrush, toothpaste, soap, comb, toilet paper, plastic bags, tissues, sanitary napkins, moist towelettes)		
Local map marked with evacuation routes		
Communication kit (contact numbers, cell phone or coins for pay phone)		
Blankets or sleeping bags		
Tools and other items (paper and pencil, needles and thread, pliers, shutoff wrench, shovels, tape, medicine dropper, whistle, plastic sheeting, fire extinguisher, emergency preparedness manual, tube tent, compass)		
Entertainment (e.g., books and games)		
Home Disaster Supplies: Basic kit and evacuation kit plus the following items	YES	NO
Additional blankets and sleeping bags		
Wrench to turn off utilities (stored near shutoff valves)		
If you live in a cold-weather climate, think about warmth. It's possible the power will be out and you will not have heat. Have at least one complete change of warm clothing and shoes per person, including: a jacket or coat, long pants, long sleeve shirt, sturdy shoes, and a hat and gloves.		

Knowledge Review

You're packing a disaster supply kit. There are a few important items that you need to add. Select all the items from the list below that you should add to a disaster supply kit.

- A. Toothbrush
- B. Can opener
- C. First aid kit
- D. Dress shoes
- E. Wrench
- F. Notepad and pencil
- G. Cell phone
- H. Chainsaw
- I. Laptop computer
- J. Cash and credit cards
- K. Golf clubs
- L. Blender

Answer:

A, B, C, E, F, G, J

Stay or Go?

If there's a chance for a disaster, how do I know if I should stay or go?

Evacuation vs. Sheltering in Place

Even if you've done everything right to prepare at home or in the office, the situation still may require you to evacuate. Should you evacuate or shelter in place? If you're near an incident site, evaluate the situation and determine what to do. The decision is not always easy.

If your time and location allow, listen to the Emergency Alert System (EAS). Emergency management professionals who are evaluating the incident may provide instructions and tips.

Either way, there are precautions you can take.

Evacuation

If you choose evacuation, or if emergency managers require evacuation, be sure to take steps to ensure your safety. For instance, always keep your evacuation supplies in a convenient location. Some people keep their supplies in the car trunk.

And if you do own a car, keep your gas tank full or nearly full — especially during high-risk months for seasonal hazards. If you don't own a car, make alternate arrangements for transportation with friends or local government.

Remember: If you have children, know their school's procedures for an evacuation.

Sheltering in Place

Depending on your situation, staying inside may be safer than evacuating. If this is the case, know what to do for the specific hazards in your area.

You should select a safe room ahead of time, preferably an interior room with no (or few) windows. Have your disaster supply kit ready, as well as water, food, and snacks. Books and other supplies can make the situation more comfortable. And remember to have food for your pets!

Stay tuned to the Emergency Alert System (EAS) for additional instructions. You should also be aware of local and national warning systems and where to get information as a disaster progresses (e.g., NOAA Weather Radio).

You will learn more about sheltering in place during the classroom *CERT Basic Training* course.

Knowledge Review

Which of the following are procedures for sheltering in place?

- A. Move to an interior room
- B. Listen to a local or national warning system
- C. Have water, food, and snacks available
- D. Create a sheltering-in-place disaster kit

Answer:

A, B, C

Lesson Summary

Before a disaster strikes, you should:

- Identify potential hazards in the home and workplace
- Take steps to mitigate those hazards
- Develop and practice a family disaster plan
- Assemble a disaster supply kit

You have completed this lesson. You are now ready to begin Lesson 1-3: CERT Organization.

Module 1: CERT Basics

Lesson 1-3: CERT Organization

Lesson Overview

Welcome to Lesson 1-3: CERT Organization.

Effective team organization is vital to fulfilling the CERT goal of augmenting response resources. Good organization allows protocol to be followed and ensures the safety of team members. This lesson explains how CERTs are organized and how they tie into overall incident response. You will learn more about team organization during the classroom training.

After completing this lesson, you should be able to:

- State the role of the Incident Command System (ICS) in CERT organization
- Explain how CERT decision-making relates to rescuer safety

It should take you approximately **25 minutes** to complete this lesson.

Basics for CERT Participation

The first part of an organized CERT program is an Emergency Operations Plan (EOP). This plan is developed by your local professional response agencies and describes how your community will prepare for, respond to, and recover from an emergency or disaster.

CERTs are part of the response organization outlined in the EOP. At all times, CERTs operate according to policies established by the local emergency response agency.

What can be found in an EOP?

Elements of an EOP

EOP:

- Establishes emergency management and emergency response organization using the Incident Command System (ICS) and assigns responsibility for key positions
- Establishes lines of authority and coordination among government departments and agencies, and community organizations

- Describes how protection will be provided for people and property
- Identifies available response resources

Where Will You Fit?

You will now have an opportunity to learn what three CERT members have to say about how they fit into their CERT organization.

You will have the chance to perform a number of different jobs as a CERT member. CERT offers opportunities for you to build on skills you already have or find something completely new to contribute to your team. Let's see what three CERT members have to say about how they fit into their CERT organization.

Sandy Bastille

A sudden thunderstorm in our community brought high winds, along with bigger than usual waves that washed over the shore causing flooding on our streets and sidewalks. The water pouring onto the streets and sidewalks was just phenomenal. People were scurrying around trying to get out of the way of the water. The first responders responded quickly, then CERT members were activated and they stepped right in. They proactively coordinated the people in the streets, ensuring that everyone in the community was accounted for and safe. The first responders set up barricades and CERTs were asked to direct everyone away from the flooding to higher ground since those areas weren't inundated with water. The public works department set about their work and, because of the safety zones that were set up around the barricades, they were able to move their equipment safely without fear of anyone being in their way. The barricades allowed us to quickly identify what the actual danger spots were and make sure that people kept clear of those areas.

Sara Trimble

I've gotten into the disaster programs within the hospitals, both the one I work at and the one that's close by, and helping their disaster committees come up with plans, what to do should there be disasters, as well as providing communications support via the ham frequencies.

John Clark

There are multiple roles in CERT, and in our group we've all kind of gravitated to our specialty. I'm an outdoor person, so I like to be outdoors. I kind of gravitate more toward the urban search and rescue, being out in the front line, checking things out and providing information back to our CERT director.

The Incident Command System

To understand the CERT organization, it is helpful to know a little about the Incident Command System (ICS).

Professional responders use ICS to manage and respond to emergencies and disasters. CERT uses ICS for the same reason.

The basic ICS structure is established by the first person at the scene, who becomes the Incident Commander (IC).

ICS Expansion

In a small incident, the IC may handle all duties — much like a police officer at a traffic accident. In larger events, the IC delegates responsibility for some duties to make the overall response more manageable.

The ICS structure is designed to be flexible, expanding and contracting with the needs of the incident. As needs and demands at the incident expand, the IC will assign people, called Section Chiefs, to help manage the incident. As the incident expands further, tasks that need to be accomplished are assigned to one of the ICS Sections.

ICS Chart

Each ICS job comes with its own duties, as seen below:

Incident Commander:

- Leader
- Decides what is to be done

Operations Section Chief:

- Doer
- Implements the decisions made by the IC

Logistics Section Chief:

- Getter
- Ensures that the personnel, equipment, and tools required by operations to implement the IC's decisions are in the right place, at the right time, in the right quantities

Planning Section Chief:

- Thinker
- Receives, filters, and compiles information coming in from incident scene

Administration Section Chief:

- Recorder
- Collects all incident data after they have been compiled, acted on, and/or are no longer needed.

CERT Organization in a Disaster

The government agency that sponsors your local CERT Program will establish local protocols for CERT activation and operations. These local protocols will be based on ICS and, when working in their neighborhood or workplace, team members will use ICS to manage CERT activities.

As a CERT member, you first respond to a disaster by reporting to your neighborhood or workplace staging area with your supplies. Along the way, record the locations and types of damage you see. You'll use this information to establish priorities and make decisions about if and how the team will respond.

The CERT Team Leader

The first CERT member to arrive becomes the Incident Commander (IC). The IC will begin managing operations until the designated CERT Team Leader arrives.

Once the Team Leader arrives at the staging area, he or she will assume the responsibilities for managing CERT operations. Let's say you are the Team Leader. What are your duties?

- First, make your ICS position assignments. Prioritize the CERT response to the incident so that you can do the most good for the most people.
- Then you should ensure that information is continually gathered about injuries and damage. Make sure you document these findings and all other team operations.
- And don't forget to communicate and coordinate with professional responders. You will continue to manage operations until you are relieved by a professional responder on the scene.

CERT Teams

CERT members may operate as a single team that performs all activities as required. But CERT members may also be assigned to smaller teams. Teams will be assigned based on incident needs. Typical team assignments include:

- Fire Suppression Teams
- Search and Rescue Teams
- Medical Teams

Team Makeup

If the incident does call for smaller teams, each team must have at least three members and a designated leader.

The designated Team Leader is responsible for ensuring team safety, communicating with the Section Chief, and carrying out the assigned tasks. Two team members become a "buddy team" and respond to incidents as directed. The other member serves as a runner and relays messages between the team and the Operations Section Chief at the Incident Command Post (ICP).

The Incident Command Post

The CERT Incident Command Post (ICP) is set up near the staging area. From this location, the CERT Team Leader and Section Chiefs manage and direct CERT activities.

If you, as Team Leader, have to leave the ICP for any reason, you should pass the responsibility for team operations to another CERT member. This person will then become the Incident Commander.

Benefits of the CERT Structure

An organizational structure helps CERT leaders and members to be more effective and focused in their response. An accountability system and management structure helps ensure the safety of the team. Organization also makes communication, information management, and activity documentation more effective.

The result of a structured approach is what matters the most: the ability to direct team responses to do the most good for the most people.

Remember, the government agency that sponsors your local CERT Program establishes other important protocols that all local CERTs must follow. You'll learn about these protocols in the classroom *CERT Basic Training* course.

CERT Mobilization

When an incident occurs, you should first take care of matters close to home. This includes handling any concerns related to:

- Yourself
- Your family
- Your home
- Your immediate neighbors
- Your CERT

You will not be able to function effectively as a CERT member before handling these concerns. Once you have resolved matters in your immediate area, you should function according to your team's Standard Operating Procedures.

Communication

Two-way communication between the CERT Team Leader and CERT teams operating in the field is vital.

Situations and priorities may change rapidly during a response. The CERT Team Leader must be aware of these changes and communicate changing information to members in the field. Doing so helps to ensure that CERT members act safely and do the greatest good for the greatest number.

Two-way communication also plays an important role in decision-making.

CERT Decision-Making

Good decisions depend on reliable and current information. An open line of communication between the CERT Team Leader and the CERTs and individual CERT members in the field ensures that they all have the most recent information about disaster events. This information then allows CERTs to make decisions and tailor their response to the changing situation efficiently and safely.

And because team safety is always the first priority, **all** decisions will be made with one key question in mind ...

Is It Safe?

Is it safe for me to attempt this task?

CERT Documentation

Mobilization and decision-making also require documentation. You can play a role in incident documentation and maintain an efficient flow of information for your team. Documentation has many uses. It's a good way to account for team members and deploy them where they will do the most good. Once on the scene, they can document damages and track injuries.

Putting the situation in print can also help you develop an understanding of the overall situation. This can be especially helpful when professional responders arrive on the scene. Be prepared to provide them with your assembled documentation as soon as they arrive.

Standard forms are available for many types of CERT documentation. You will learn more about documentation and using the forms in the CERT classroom training.

Knowledge Review

What is most critical to CERT decision-making?

- A. Ongoing communication
- B. Team assignments
- C. Training in ICS
- D. Taking care of your neighbors

Answer:

A

Lesson Summary

In this lesson, you learned that:

- The ICS is used to manage emergency operations.
- CERTs use ICS, which expands and contracts as needed to handle the situation.
- Efficient two-way communication is essential for effective decision-making.
- The CERT decision-making process is guided by the goal of CERT safety.

Now, let's review what you learned in this module and then see what you can expect to learn about in the next module.

Module Summary

In Module 1: CERT Basics, you learned that:

- Disasters may overwhelm emergency response resources.
- CERTs can extend the capabilities of response organizations through hazard mitigation and response activities.
- Before a disaster, CERTs focus on emergency preparedness and hazard mitigation.
- After a disaster, CERTs may operate directly or assist responders in activities to save or sustain lives and protect property.
- There are many types of potential hazards in the home and workplace and ways to mitigate those hazards.
- You should develop and practice a family disaster plan.
- A disaster supply kit includes basic items that members of a household will need in the event of a disaster.
- The ICS is used to manage emergency operations.
- CERTs use ICS, which expands and contracts as needed to handle the situation.
- Efficient two-way communication is essential for effective decision-making.
- The CERT decision-making process is guided by the goal of CERT safety.

What's Next

Now it's time to move on to Module 2: Fire Safety. You'll learn things such as the role of CERTs in fire safety, how to identify potential fire hazards in your home, how to mitigate those hazards, and the importance of safe practices for fire suppression.